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ABSTRACT

This project was designed to develop a vocational language program for secondary trainable mentally retarded students based on an analysis of the concepts needed for entry and continuation in vocational training programs and related jobs. Twenty-five students from the Ebensburg State School in Pennsylvania participated in the project. The three vocational skill areas of carpentry, woodworking, and auto body were observed, and task analyses were developed which included task statements, method verbs, concept areas, and detailed task breakdowns. Assessment devices were then developed and the concepts tested. The final phase involved experimental teaching at levels indicated by the test results. Concept modules were developed for a limited number of concepts based on the task analyses. Students were expected to demonstrate comprehension of the concept and not necessarily the verbal expression of the concept. The pilot project demonstrated a relationship between acquisition of vocational skill and language development. The concept module approach proved effective in organizing vocational tasks in terms of progression of a given skill area. Appendixes include assessment instruments, list of concepts, several task analyses for the three vocational areas, and 14 concept modules that include goals, materials, and procedures. (NJ)

VOCATIONAL LANGUAGE PROJECT FOR SECONDARY TRAINABLE MENTALLY RETARDED

(Project Number: 19-6011)

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I. INTRODUCTION

In assessing the educational programs for the secondary trainable mentally retarded population, a need existed for a relevant language program to co-exist with a previously established vocational training program. A project was designed to develop a vocational-language program with a two fold purpose:

(1) analyze jobs in a vocational training facility as related to communication skills needed for initial entry and/or continuation in training program or job.

(2) develop, train and integrate functional vocabulary as related to vocational training program.

Twenty five secondary trainable mentally retarded students from the Ebensburg State School participated in the project from February to June. The students were enrolled in either a vocational program at Admiral Peary Vocational Technical School or the Portage Annex of the Ebensburg State School. A team, composed of language clinicians, vocational teachers, director of research and supervisor of speech/language programs, were responsible for the project phases.

II. PROJECT PHASES

The project was carried out in three phases: (1) observation of vocational programs, (2) testing of concepts needed in vocational areas, (3) experimental teaching of the concepts. With each phase of the project, it was necessary to continually reappraise the intent of the project, that is, to develop, train and integrate functional vocational vocabulary as related to vocational training programs. The present language program is designed to emphasize comprehension (receptive skills) of concepts and not necessarily the verbal expression of the concepts. As each phase progressed, materials and techniques were developed. Task analyses, screening formats and concept modules are included in the appendices. The development of these materials are explained in detail under the project phase from which they evolved.

Observation Phase

The first phase was observation of vocational programs. Three vocational skill areas were selected for this project. The Admiral Peary Vocational Technical School was the site chosen for vocational training. The three vocational areas were carpentry, woodworking, and auto body. In cooperation with the instructors from these areas, three language clinicians from Appalachia Intermediate Unit observed the methods and types of tasks used in the vocational areas. The language clinicians were interested in determining what concepts were necessary for the student to have in their receptive abilities to carry out required vocational tasks or skills. The observations provided opportunity to examine the relationship that exists between the skill and the language involved in the skill. Specific skills/tasks were often explained through manual demonstration in lieu of verbal instruction. This adaptation by the instructor appeared to be due to the student's lack of understanding of a concept by it's verbal label. In many training situations, it appears easier to demonstrate the skill manually than to explain verbally. However, manual demonstration or gesture is not considered language in the symbolic sense. Gesture, although communicative in nature, is not symbolic language.

The instructors of the three vocational areas submitted task analyses specific to their vocational shops. Included in these analyses were statements of the task, method verbs to be used, concept areas needed, and a detailed breakdown of the task. Examples of the task analysis sheets are included in Appendix F. It was from the individual task analysis that the language clinicians began to develop the concept modules to be used in the language program. The task analyses yield specific information and are designed to the functional level of the student. The concepts abstracted from task are those that are considered necessary for mastery of the skill.

Information from the task analyses and entry level skills provided the basis for the extrapolation of concepts. The list of concepts used in the project appear in Appendix E. The concept list is open ended, allowing addition and/or

deletions as the program and/or student population changes. It is thought that the concepts evolved from this project are appropriate for secondary trainable mentally retarded students. With few exceptions, the concepts are applicable to a variety of vocational skill areas.

Test Phase

When the initial observation period was completed and concepts extrapolated, assessment devices were developed.

Prior to concept testing, an initial inventory/screening based on the Kent Language Acquisition Program was administered to all students. Modifications were made in the Kent format so as to apply more specifically to vocational skills (Appendix A, B). Pre-verbal and verbal expressive sections were administered. Basic information pertaining to attending behavior, motor imitation, receptive and expressive abilities were obtained from the modified screening. This information was helpful in determining the student's placement in a language program.

Concept testing was the next aspect of the evaluation. The concepts were randomly listed and arranged in two separate tests. The first test was evaluation of the concept given an an 'isolated unit.' No clues were given to the student. For example: "Show me 'on' was the method of presentation and the student had to demonstrate the concept of "on" in any way he chose. The second test listed identical concepts, however, method of presentation differed. The student demonstrated his understanding of the concept through 'performance of action'. For example: Clinician says: "Close the tool box". Student: finds tool box and closes lid. Concept tested: close.

Both tests evidence two basic organizational characteristics. The first characteristic is that the relational prepositions included in each test are the first seven items. These prepositions follow the Language Acquisition format. All other concepts appear without regard to specific arrangement. In constructing the test drafts concepts with polar opposites such as, hot-cold, do not appear together on the test form. It appears that students respond automatically.

(paired-associate phenomenon) when presented with a concept immediately followed by it's opposite. The random placement of concepts with polar opposites tended to reduce the automatic response and increase listening for the exact language instruction (Appendix C, D).

The results of both test drafts were recorded and analyzed for the following information:

(1) Measures of Central Tendency - Test I and Test II

(2) Type of Errors - Test I and Test II

(3) Consistency of Response

(4) Percentage of Correct Response

Twenty five students were involved in the project. Each was administered the Isolated Concept (Test #1) and Performance of Action (Test #2).

Measures of Central Tendency:

Test #1 Isolated Concept		Test #2 Performance of Action	
Mean	9.8	Mean	7.6
Medium	8	Medium	5.87
Mode	7	Mode	2 - 6 (Bimodal)

Test #1 (Isolated Concepts) had consistently higher scores than Test #2 (Performance). Possible explanations of differences between tests will be discussed at a later point.

In organizing the data and in consideration of teaching efficiency, the concepts were placed in categories. The concepts tend to cluster into four categories. Each category is open ended to accommodate change in the program for inclusion of more difficult concepts as the need arises. The categories are not organized to reflect order of difficulty, rather are so structured for progression in teaching. That is, it is thought that some concepts are necessary to have been mastered before other concepts can be introduced in the skill areas and in language instruction. In addition, certain concepts are employed in teaching other concepts. For example, concepts of on-off may be needed when

teaching the concept of turn. Students should know the relational prepositions, some directional concepts, some size concepts and some manipulative concepts so that they (the students) can organize an object in space and relate the environment to it. The first category, organizational, gives the student reference points. Concepts included in the Category #1 (Organizational) are:

in	big	pull
on	little	top
under	up	bottom
off	down	front
over	open	back
through	close	same
around	push	different

The second category includes concepts that are singular and have no polar opposite. Category #2 (Isolated) can not be taught using opposite association or negation, such as (big - little) or (big - not big). The concepts in this category are applicable in a variety of vocational skill areas.

Concepts included in Category #2 (Isolated) are:

corner	middle	side
edge	center	turn

The concepts in Category #3 (Task General) apply to most vocational areas. Teaching concepts in this category is frequently dependent upon certain organizational concepts (Category #1). Each concept in Category #3 has a polar opposite which can be an aide in teaching. When the opposite appears too difficult for the student's comprehension abilities, teaching negation of the concept is suggested. It is suggested that teaching a concept by it's opposite or negation may be limited in use. By way of example, the concept full should not always be taught using empty. Full should be taught as a separate idea, as much as possible, using substances that demonstrate full in quantity, pictures of containers being full, etc. By depending on polar opposites to teach the concept, the student frequently responds at a later carryover stage by saying or using both concepts.

Concepts included in Category #3 (Task General) are:

long	empty	tight	hot
short	full	loose	cold
hard	right	wet	clean
soft	left	dry	dirty

Category #4 is Task Specific. The concepts in this category are those that apply to specific vocational skill areas. This category serves two purposes: (1) It eliminates teaching a concept that will not be used in the vocational training of the student (and therefore not reinforced). (2) It allows for considerable specificity of input from vocational areas and is readily adjustable to the student's level. From the vocational areas included in this project, the following concepts are included in Category #4 (Task Specific) are:

Pair	Dull	Crooked
Equal	Shiny	Straight

The data was applied to the four categories in both Test #1 and Test #2 and yielded the following information:

Type of Errors Table I

	Organizational	Isolated	Task General	Task Specific	Totals
Test #1	56	49	62	64	231
Test #2	56	34	56	40	186

Percentage of Correct Response

Table II

	Concept	Test #1 %	Test #2 %
*1	in	95	95
*2	on	95	95
*3	under	100	100
4	off	90	100
5	over	65	90
6	through	70	80
7	around	85	80
*8	[illegible]	100	100
*9	old	95	95
10	turn	95	100
*11	open	100	100
*12	long	85	85
13	up	90	100
14	loose	95	90
15	top	100	95
16	full	90	95
*17	push	90	90
*18	dirty	95	95
19	wet	95	90
20	close	100	95
*21	clean	90	90
22	bottom	60	50
*23	hot	90	90
24	dry	95	90
25	smooth	75	70
26	pull	75	70
27	soft	90	90
*28	dry	90	90
29	short	80	90
30	right	60	90
31	shiny	70	65
*32	down	100	100
*33	crooked	90	90
34	most	55	70
35	front	80	75
*36	little	100	100
*37	empty	90	90
38	rough	85	80
39	middle	60	75
40	edge	55	80
*41	tight	95	95
42	hard	80	90
43	center	65	65
44	left	80	85
45	dull	60	60
46	corner	65	70
47	pair	70	80
48	side	55	75
49	same	80	85
50	least	45	50
51	straight	85	95
52	different		60

Some conclusions that might be drawn from the data are:

1. Test #1 (Isolated Concepts) appears to penalize the student by evidencing failure on test items in isolation but not in context. It is suggested that subsequent assessments omit Test #1. Errors were consistently higher (except in organizational areas) on Test #1 than on Test #2. This is some importance when considering efficiency of teaching time. If concepts are thought to be in error on Test #1 and a teaching program is established, it may well be that the concepts are already known when tested in Performance of Action (Test #2). Teaching designed toward the concepts in errors on Test #1 would mean unnecessary time used in what may already be known by the student. 2. Table II shows that the organizational category produced a number of errors indicating that some teaching at this level is necessary to give students a stronger foundation from

which integrate vocational and language skills. 3. In comparing consistency of responses between Test #1 and #2. The data showed 17 of 52 concepts were in agreement above 90%. This is 33% agreement between tests on all concepts tested. The concepts that were in agreement should be more carefully examined before teaching. Those concepts in agreement may have indications for future testing/teaching.

4. In reviewing Table II - percentage of correct/responses - the concepts in exact agreement are marked by an asterisk. The higher percentages appear in Test #2, indicating that the construction of Test #2 is more suitable for evaluating performance by the student.

5. The data indicates Test #2 is a more stable test form than draft #1. The data provides evidence for a strong teaching emphasis in the organizational concept area in order to provide the student with a solid conceptual foundation.

Teaching Phase

The final phase of the project involved experimental teaching. The clinicians began teaching at levels indicated by the test results. Modules were developed for a limited number of concepts (Appendix G). It should be noted that the student was expected to demonstrate comprehension (receptive ability) of the concept and not necessarily the verbal expression of the concept. The most successful technique was presentation via the visual or tactile modality. Initially, the auditory mode, verbal stimulation by the language clinician, was the most frequent approach utilized and the most difficult to control and monitor. Cross modal teaching is thought to be a more efficient approach.

The student's particular vocational curriculum was considered in planning, and activities appropriate to the vocational area were incorporated in the concept teaching. Some materials were duplicates of those used in the three shop areas. Other materials were developed and modified as would be applicable to generalized teaching of concepts.

On the basis of this pilot project, no preferred approach to teaching concepts is indicated. A possible consideration in determining teaching approach is whether instruction will be from a specific level to a general level, or the reverse, a general level toward a specific level. Teaching specific-to-concept involves teaching the concept as it relates directly to the task. The task could be simulated in therapy with similar materials as is found in the vocational shop area. The concept would then be taught as part of the already determined vocational skill. In the opposite approach, teaching from a general level toward a specific level, the instruction could provide the student with as many opportunities as possible to incorporate the concept. Experientially, this could enable the student to apply or relate the concept information back to the specific vocational task. The student's reasoning abilities and the frequency of use with the specific concept will be helpful in determining the type of teaching method to use.

Success in teaching will depend upon the level of the student, difficulty of the concept, and the ease of presentation. Ease of presentation includes availability of necessary materials, immediate relevance of a concept to task, carry-over opportunities, and demonstrated use (both verbal and receptive evidence) by the student. A concept presented with a variety of materials, having relevance and opportunity for application, will be more readily learned than a concept with a high degree of abstraction and of limited use.

Additional presentation and teaching methods should be explored. Team teaching, group instruction, rotation teaching, and on-the-job language instruction were not within the scope of the pilot project, however, such investigations could produce interesting results. Teaching should be kept vocationally relevant at each level. The language concepts should be given broad application in as many aspects of the student's educational and daily living environment as well as the pre and actual vocational training.

III SUMMARY

The vocational language project involved 25 students from the Ebensburg State School. Staff from Appalachia Intermediate Unit 08 speech department and the Admiral Peary Vocational Technical School cooperated to develop a language program that would be relevant in vocational training. The language program was designed to teach concepts determined necessary for vocational success in the skill areas. The students were not required to exhibit verbal expression of the concepts, rather to demonstrate comprehension of the concepts through use in the vocational areas. Evaluative procedures were developed, results examined and experimental modules were completed.

The pilot project demonstrated a relationship between acquisition of vocational skill and language (concept) development. The concept module approach proved effective in organizing vocational tasks in terms of progression of a given skill area, provided for specificity of elements in task areas and enables exploration of generalizability of concepts for the trainable mentally retarded.

Selection criteria for vocational training programs was not within the scope of this pilot. However, entry-level skills, as developed in the task analyses, appear to be critical in determining success in training programs. This project suggests that concept development also be considered as an entry-level skill. With more definitive selection and placement procedures, including attention to language (concept) development, greater success in vocational training will be achieved.

APPENDIX A - B

The vocationally relevant language screening is a modification of the Language Acquisition Program developed by Louise Kent, Ph.D. (Champaign, Illinois: Research Press, 1974.) Draft I includes Pre-Verbal and Receptive Skills; Draft II samples Verbal-Expressive Skills.

VOCATIONAL/LANGUAGE I
(Screening)

NAME _____ DATE _____

PRE-VERBAL SKILLS

ATTENDING PHASE

Sitting Still

Eliminating Interfering Behaviors

_____ Body Movements _____ Vocal
_____ Hand Movements _____ Self-abusive

General Response to Auditory Stimuli

_____ Eye blink _____ Localizing sound
_____ Vocalization _____ Other startle response

Looking at Objects (5 random objects)

_____ _____ _____ _____ _____
_____ _____ _____ _____ _____

Tracking Objects (5 random objects)

Horizontal	Vertical	Diagonal	180° arc	Circle
_____	_____	_____	_____	_____

Pre-Trial Eye Contact (5 random objects)

_____ _____ _____ _____ _____

MOTOR IMITATION PHASE

Manipulation of Objects

Put object in toolbox	Pound table with object	Pick up bucket
_____	_____	_____

Close lid of toolbox	Brush table
_____	_____

Gross Motor Imitation

Clap hands	Raise arm	Fold hands	Point to clock	Pat chest
_____	_____	_____	_____	_____

Fine Motor Imitation

Push button	Squeeze sponge	Turn lid	Key in lock	Peg in hole
_____	_____	_____	_____	_____

RECEPTIVE LANGUAGE SKILLS

BASIC RECEPTIVE PHASE

Pointing to Body Parts Named

Ear	Eye	Hair	Hand	Nose	Teeth	Foot
___	___	___	___	___	___	___
___	___	___	___	___	___	___

Pointing to Articles of Clothing Named

Shirt	Pants	Shoe	Sock	Hat	Coat
___	___	___	___	___	___
___	___	___	___	___	___

Pointing to Objects Named

Keys	Paintbrush	Screws	Nail	Bucket	Hammer	Screwdriver	Toolbox
___	_____	_____	___	_____	_____	_____	_____
	_____	_____	___	_____	_____	_____	_____

Finding Concealed Objects: One Box

Keys	Paintbrush	Screws	Nail	Bucket	Hammer	Screwdriver	Toolbox

Pointing to Room Parts Named:

Table	Chair	Wall	Floor	Light	Door	Window	Clock

RECEPTIVE EXPANSION PHASE I

Performance of Action Named: Body Parts

Clap Hands	Raise Arm	Wipe Mouth	Close Eyes	Stand Up	Sit Down	Fold Hands

Open Eyes

Performance of Action Named: Objects

Push Button	Pound Nail	Pick Up Bucket	Brush Table	Put On Hat

Take Off Hat	Turn Lid

Finding Concealed Objects: Two Boxes

Hammer	Nail	Keys	Paintbrush	Shoe	Hat

Performance of Action Named: Room Parts

Put Key On Chair	Put Paintbrush On Chair	Open Door	Close Door	Sweep Floor

Turn Off Light	Turn On Light	Wash Table

RECEPTIVE EXPANSION PHASE II

Discriminating Possession: Objects

	Keys	Paintbrush	Screw	Nail	Bucket
Student's Name (My)					
Trainer's Name (Your)					

	Hammer	Screwdriver	Toolbox
Student's Name (My)			
Trainer's Name (Your)			

Placing Objects in Prepositional Relationship to Room Parts

Put the _____ (choose from eight objects)

in toolbox	on chair	under chair	on floor	on table	under table

Giving Related Object Pairs
Give me the _____ and the _____.

hammer/nail	bucket/sponge	screwdriver/screw

Finding Concealed Object Pairs: Toolbox Search
(same objects as above)

Sorting Colors

Red	Green	Blue	Yellow	Black	White	Purple	Orange	Brown

RECEPTIVE EXPANSION PHASE III

Verb and Adverbial Place - Where Commands:
Body/Space Awareness

Look up	Look down	Fall down	Stand up	Turn around	Come to me

Walk on line	Walk around circle	Get in circle	Crawl under table	Run to wall

Vocabulary Expansion Nouns

Penny	Candy	Circle	Paper	Hammer	Line	Nail	Lid	Pencil	Soap	Towel

Water	Work Card	Saw	Board	Wax	Paint	Sponge	Peg	Rack	Cabinet	Stool

Finding Objects Named: Toolbox Search

Paintbrush	Screw	Hammer	Paper	Screwdriver	Keys	Nail	Work Card

Pencil	Saw

Sorting Big/Little
Use 20 object which are the same, except for size (10 big - 10 little).

Big	Little	Big	Little

Pointing to Color Named

Red	Green	Blue	Yellow	Black	White	Purple	Orange	Brown

RECEPTIVE EXPANSION PHASE IV.

Verb + Noun Adverbial Place - Where Commands

Put screw in toolbox Put screw on line Give screw to me Put screw in circle

Verb + Noun Commands: New Nouns

Pound Nail Tear Paper Pour Water Make Circle Stack Boards Make Line

Make X Cut Paper Saw Board Pour Paint

Pointing to Big One

Big and Little pairs, one pair at a time (show me the big one)

Paintbrush Screw Nail Board Hammer Toolbox Bucket Keys Saw Paper

Give me 1-10

one two three four five six seven eight nine ten

Pointing to Color + object named

Use colors mastered and at least five of these objects: screwdriver, sponge, bucket, hammer, toolbox, paintbrush, paper, pencil, line, circle.

RECEPTIVE EXPANSION PHASE V

Finding Object Named: Toolbox Search

Pointing to Big/Little One

Use big/little pairs of 5 different objects, one pair at a time

Big Ltl Big Ltl Big Ltl Big Ltl Big Ltl

Pointing to 1-5 + Object

Place 3 cards before student: One with correct object, wrong number, one with correct number, wrong object, one with correct number and object

Give me (two) (Keys) (etc)
number objects

Draft
Modified L.A.P. format

VOCATIONAL LANGUAGE II

NAME _____ DATE _____

VERBAL SECTION - EXPRESSIVE

VOCAL IMITATION PHASE

Do this; say _____

Ear	Eye	Hair	Nose	Teech	Paint	Hat	Keys	Screw	Nail	Brush	Shoe
___	___	___	___	___	___	___	___	___	___	___	___
___	___	___	___	___	___	___	___	___	___	___	___

Shirt	Pants	Box	Chair	Door	Table	Tool	Bucket
___	___	___	___	___	___	___	___
___	___	___	___	___	___	___	___

BASIC EXPRESSIVE PHASE

Naming body parts

Ear	Eye	Hair	Hand	Nose	Teeth
___	___	___	___	___	___
___	___	___	___	___	___

Naming Objects

Keys	Paintbrush	Screw	Bucket	Nail	Hammer	Screwdriver	Toolbox
___	___	___	___	___	___	___	___
___	___	___	___	___	___	___	___

Naming Articles of Clothing

Shoe	Pants	Shirt	Sock	Hat	Coat
___	___	___	___	___	___
___	___	___	___	___	___

Naming Concealed Objects
same objects as above

___	___	___	___	___	___
___	___	___	___	___	___

Naming Room Parts

Chair	Table	Wall	Floor	Door	Light	Window	Clock
___	___	___	___	___	___	___	___
___	___	___	___	___	___	___	___

EXPRESSIVE EXPANSION PHASE I

Discriminating Possession: Whose? With Objects

	Toolbox	Bucket	Hammer	Keys	Nai	Paintbrush
Student's Name (My)	___	___	___	___	___	___
Trainer's Name (Your)	___	___	___	___	___	___

	Screw	Screwdriver
Student's Name (My)	___	___
Trainer's Name (Your)	___	___

Naming Objects in Prepositional Relationship to Room Parts
Any match, such as what is on the floor? keys.
Choose from eight objects

In toolbox	___	___	___	___
On chair	___	___	___	___
Under table	___	___	___	___
On floor	___	___	___	___

Naming Missing Object: What's Gone?

Screw	Hammer	Keys	Hat	Nail	Screwdriver	Paintbrush	Shoe

Naming Room Part in Prepositional Relationship to Object

Response: One word room part

Where is the _____? Screw, hammer, keys, hat, nail, screwdriver, paintbrush, shoe

(In) toolbox	(On)Floor	(Under)Chair	(On) Chair	(On)table	(Under)Table

Manding Actions: Verb - Noun

Throw	Push	Put on	Pound	Turn

EXPRESSIVE EXPANSION PHASE II

Naming Colors

Red	Blue	Green	Yellow	Black	Orange	Purple	Brown	White

Naming Concealed Colors

Use colors correct from above

Naming Two Objects

Hammer - Shoe	Nail - Hat	Screw - Key	Paintbrush - Toolbox

Bucket - Coat	Screwdriver - Sock

Naming Object + Room Part in Prepositional Relationship

Response: Two words

Where is the _____? Screwdriver, Hammer, Nail, Bucket, Toolbox, Keys, Paintbrush, Screw

Screwdriver	Hammer	Nail	Bucket	Keys
Floor ____	Toolbox ___	Chair___	Table _____	Toolbox _____

Paintbrush	Toolbox	Screw
Table_____	Floor___	Table____

Counting to Ten

1-2-3-4-5-6-7-8-9-10 _____

1-2-3-4-5-6-7-8-9-10 _____

EXPRESSIVE EXPANSION PHASE III

Vocabulary Expansion: Naming Nouns

Ears	Eyes	Face	Hair	Feet	Hands	Knees	Nose	Mouth	Teeth	Toolbox

Chair	Door	Wall	Floor	Light	Table	Hat	Coat	Shoe	Socks	Line

Circle Screwdriver Hammer Sponge Nail Screw Penny Candy Water

Paintbrush Towel Soap Bucket Paper Keys Pencil Peg Stool Cabinet

Jack Board Saw Wax Window X Lid Work Card Paint

Vocabulary Expansion: What's Gone? With three objects
Items mastered above
Write the item tested in the (_____).

Standing Action: Verb + Noun with New Nouns
Response: Two words
Tear paper Make tower Push broom Put on lid Pound nail

Naming Color + Object

Counting Disappearing Objects 1-10
As pennies are placed in bank
1-2-3-4-5-6-7-8-9-10_____
1-2-3-4-5-6-7-8-9-10_____

APPENDIX C - D

ISOLATED CONCEPTS-TEST #1

VOCATIONAL LANGUAGE PROJECT

Name _____ Date _____ Clinician _____

Residence _____ Class _____ Teacher _____

Additional Information _____

Total Correct Responses _____

CONCEPTS	RESPONSES		COMMENTS
1. IN			
2. ON			
3. UNDER			
4. OFF			
5. OVER			
6. THROUGH			
7. AROUND			
8. BIG			
9. COLD			
10. TURN			
11. OPEN			
12. LONG			
13. UP			
14. LOOSE			
15. TOP			
16. FULL			
17. PUSH			
18. DIRTY			
19. WET			
20. CLOSE			
21. CLEAN			
22. BOTTOM			

CONCEPTS	RESPONSES	COMMENTS
23. HOT		
24. DRY		
25. SMOOTH		
26. PULL		
27. SOFT		
28. BACK		
29. SHORT		
30. RIGHT		
31. SHINY		
32. DOWN		
33. CROOKED		
34. MOST		
35. FRONT		
36. LITTLE		
37. EMPTY		
38. ROUGH		
39. MIDDLE		
40. EDGE		
41. TIGHT		
42. HARD		
43. CENTER		
44. LEFT		
45. DULL		
46. CORNER		
47. PAIR		
48. SIDE		
49. ALIKE (SAME)		
50. LEAST		
51. STRAIGHT		
52. EQUAL		

PERFORMANCE OF ACTION - TEST #2

VOCATIONAL LANGUAGE PROJECT

Name _____ Date _____ Clinician _____

Residence _____ Class _____ Teacher _____

Additional Information _____

Total Correct Responses _____

CONCEPTS	RESPONSES	COMMENTS
1. Screwdriver (IN) tool box		
2. Board (ON) table		
3. Bucket (UNDER) chair		
4. Tool box (OFF) table		
5. Turn board (OVER)		
6. Nail (THROUGH) board		
7. Turn board (AROUND)		
8. Put pencil in (BIG) cup		
9. Get (COLD) water		
0. (TURN) screw/lid		
1. (OPEN) paper towel		
2. Stack (LONG) boards		
3. Lift box (UP)		
4. Turn screw/lid (LOOSE)		
5. Paintbrush on (TOP) of paint can		
6. Put (FULL) paint can in cabinet		
7. (PUSH) box		
8. Throw (DIRTY) paper towel away		
9. (WET) the paper towel		
0. (CLOSE) tool box		
1. Make paintbrush (CLEAN)		
2. Paint (BOTTOM) of box		
e (HOT) water		

CLINICIAN _____ DATE _____ CLASS _____

24. Put (DRY) paper towel in cabinet		
25. Sand board (SMOOTH)		
26. (PULL) table		
27. Put (SOFT) paper towel on chair		
28. (DRY) back of car		
29. Put (SHORT) boards in box		
30. Put (SHINY) penny in cup		
31. Turn lid to (RIGHT)		
32. Put box (DOWN)		
33. Take (CROOKED) nail out		
34. Give me the (MOST) pennies		
35. Wash (FRONT) of car		
36. Put ships in (LITTLE) cup		
37. Throw (EMPTY) paint can away		
38. Stack (ROUGH) boards		
39. Put nail in (MIDDLE) of board		
40. Paint (EDGE) of board		
41. Turn screw/lid (RIGHT)		
42. Pound nail (HARD)		
43. Put screw in (CENTER) of circle		
44. Turn lid to (LEFT)		
45. Put (DULL) pennies in cup		
46. Put paint can in (CORNER) of table		
47. Pick up the (PAIR) of shoes		
48. Paint (SIDE) of box		
49. Put (SAME) nail in tool box		
50. Put the (LEAST) pennies in cup		
51. Pound the nail (STRAIGHT)		
52. Put (DIFFERENT) screws in box		
53. Pound nail (LIGHTLY)		

APPENDIX E

CONCEPT CATEGORIES
(extrapolated from task analyses and Kent program)

ORGANIZATIONAL	ISOLATED	GENERAL TASK	SPECIFIC TASK
in	turn	cold	smooth
on	middle	long	shiny
under	edge	loose	crooked
off	center	full	rough
over	corner	dirty	dull
through	side	wet	pair
around		clean	straight
big		hot	equal
upon		dry	
up		soft	
top		short	
push		right	
close		most	
bottom		empty	
pull		tight	
back		hard	
down		left	
front		least	
little			
same			
different			

APPENDIX F

Basic Carpentry
Basic Woodworking
Auto Body

TASK: to measure in whole inches

Preparation, Materials, Equipment:
wooden rule, sharpened pencil, blocks cut and squared on whole inches

Setting:
work area, work bench

General Instructions:
Place all materials on work bench.

Entry Level Skills:
recognizing whole numbers
opening and closing wooden rule

Method Verbs: find, place, open, close, write (mark)

Concept Areas:
open - close
on
edge

Task Analysis:
1. Find wooden block
2. Place block on bench
3. Select surface to measure
4. Pick up wooden rule
5. Open wooden rule
6. Place open rule on surface of block
7. Find edge of block
8. Find "zero" end of rule
9. Place "zero" end of rule on edge of block
10. Find opposite edge of block
11. Pick up pencil
12. Find number on rule at edge of block
13. Write (mark) number on block
14. Place pencil on bench
15. Pick up rule
16. Close rule
17. Place rule on bench
18. Find another surface (edge) of block
19. Repeat steps 4-18 until all surfaces (edges) are measured

Basic Carpentry

TASK: to lay out length

Preparation, Materials, Equipment:
work bench, try square, sharpened pencil, wooden rule, stock lumber with squared edges

Setting:
Work area - work bench

General Instruction:
Place all materials on work bench
Demonstrate try square (blade and straight edge)

Entry Level Skills:
measure (mark) in whole inches opening and closing wooden rule - grasping

Method Verbs: place, find, mark, open, close

Concept Areas: open - close
long side
edge on
straight

Task Analysis:

1. Find stock lumber (board)
2. Place lumber on bench
3. Find edge of lumber (board)
4. Pick up try square
5. Place blade of square on edge of lumber (board)
6. Pick up pencil
7. Start at edge of board mark line along straight edge of square
8. Place pencil on bench
9. Place try square on bench
10. Pick up wooden rule
11. Open rule
12. Place open rule on side of board
13. Find "zero" end of rule
14. Find line marked on wood (side)
15. Place "zero" end of rule on line
16. Pick up pencil
17. Mark length(pre-determined inches)
18. Place pencil on bench
19. Close wooden rule
20. Place wooden rule on bench
21. Pick up try square
22. Find mark (made with rule)
23. Place blade of square on edge of board
24. Put straight edge of square on mark
25. Repeat steps 6-9

TASK: to crosscut

Preparation, Materials, Equipment:
work bench, bench vise, crosscut saw, try square, stock lumber with length layed out and marked to cut

Setting: Work area

General Instructions:
Identification of saw parts
Safety in use of saw
Place all materials on work bench

Entry Level Skills:
use of try square, use of bench vise, lay out and marking skills

Method Verbs:
find, place, loose, tight, tilt, push, pull

Concept Areas:

tight	push	in	back
loose	pull	edge	turn

Task Analysis:

1. Loosen (turn) bench vise
2. Place board in bench vise
3. Find cutting line
4. Place board so that line is near edge of saw
5. Tighten (turn) bench vise
6. Pick up saw (use dominant hand)
7. Place heel (back) of saw on edge of board
8. Tilt saw (45° angle to wood)
9. Pull back on saw (may use thumb of opposite hand to guide saw)
10. Push saw back to starting position
11. Use short stroke to begin cuts
12. Lengthen strokes (full arm motion)
13. Stop cutting motion
14. Look at cut, if near completion shorten strokes
15. Complete cut

Task Analysis #4

Basic Carpentry

TASK: to nail

Preparation, Materials, Equipment:
work bench, hammer, nails, stock lumber (wood)

Setting:
work area - work bench

General Instructions:
Place all materials on work bench

Entry Level Skills:
grasp

Method Verbs: find, place, hit, hold

Concept Areas:

on	up
edge (end)	down

Task Analysis:

1. Find wood (block or strip)
2. Place wood on work bench
3. Pick up nail
4. Hold nail in one hand
5. Place nail on wood (at point to be nailed)
6. Pick up hammer (use dominant hand)
7. Grasp hammer (handle end)
8. Hit nail head with hammer (use short up-down strokes)
9. Take away hand holding nail
10. Hit nail head (use up-down strokes)
11. Stop hitting nail when head is even (flush) with surface
12. Place hammer on bench

TASK: to sand wood surface

Preparation, Materials, Equipment:
sand paper (#60-#110), sand paper holder, eye protectors, wood blocks

Setting:
work area, work bench

General Instruction:
Place newspaper or cloths in work area
Place sand paper and holder on bench
Put on eye (protector) glasses

Method Verbs:
Placing, grasping, moving (cross body)

Concept Areas:

on	left
turn	right
smooth	

Task Analysis:

1. Place block of wood on bench
2. Put wood in left hand
3. Pick up sand paper in right hand
4. Move sander over wood (cross body movement)
5. Continue until surface is smooth
6. Turn wood block
7. Repeat steps #2 - #5

Task Analysis #6

Basic Woodworking

TASK: to stain a woodworking project

Preparation, Materials, Equipment:
paintbrush, rags, containers, sticks, #100 fine sandpaper, lacquer thinner alcohol, shellac, stain, hammer, screwdriver

Setting:
work area, work bench

General Instructions:
1. With #100 fine sandpaper, sand piece of wood until smooth.
2. Turn wood over and repeat.
3. Place dust rag in lacquer thinner.
4. Pick up rag and dust piece of wood.
5. Place rag in pre-mixed sealer.
6. Wipe rag over all sides.

Method Verbs:
place, wipe, move (cross body), brush

Concept Areas:

top	on	edge	push
smooth	under	side	off
turn	in	open	dry
over			

Task Analysis:

1. Open stain can and stir.
2. Take paintbrush and dip edge in stain.
3. Wipe brush on side until it doesn't drip.
4. Place brush on wood and move brush across wood (cross body movements).
5. Brush stain on surface (side) of wood.
6. Wipe off excess stain.
7. Repeat steps #2 - #6 until area (sides) are stained.
8. Place wood (project item) on bench to dry.

TASK: to bore holes in wood

Preparation, Materials, and Equipment:
eye protection, 1/4" - 3/8" - 1/2" auger bit, brace, scratch awl, scrap lumber, sandpaper #80

Setting:
work area, work bench

General Instructions:
1. Place wood in vice so that "end" is up (horizontal)
2. Turn vice to tighten
3. With pencil, mark and "x" on the wood
4. Put scratch awl at middle of "x"
5. Place hand on top of scratch awl, then raise hand and hit the top of scratch awl hard

Method Verbs:
place, put, raise, hit, grasp (grab) look

Concept Areas:

in	right	tight	through
on	top	over	push
turn	hard	around	out
left			

Task Analysis:
1. Place auger bit and brace on work bench
2. Turn end of trace to left
3. Put auger into chuck and turn to the right to tighten
4. Put auger into hole made by scratch awl
5. Place left hand over top of brace
6. Hold brace handle with right hand
7. Push on brace
8. Turn handle to the right
9. Keep handle level with waist (square to wood)
10. Turn handle slowly until bit comes through wood
11. Take brace and bit out of hole
12. Take wood out of vice
13. Turn wood over
14. Put wood bark in vice and tighten
15. Put brace and bit in hole
16. Repeat steps #4-10
17. Place brace and bit on work bench

TASK: to wash car

Preparation, Materials, Equipment:
bucket, soap (cleanser), sponge, hose preattached to spigot

Setting:
open space work area with drain, spigot (water source)

General Instructions:
1. Ignition off
2. Windows closed
3. Careful of metal areas of car (bumpers, etc)
4. Sequence of activities lead from panel wash to total car (all panels)

Entry Level Skills:
filling bucket, using hose, using sponge, measuring (soap) turning and grasping

Method Verbs:
placing, opening, closing, measuring, positioning, filling, wetting, squeezing

Concept Areas:
1. on-off
2. wet-dry
3. dirty-clean

Task Analysis:
1. Place all materials in work space
2. Open cleaner (soap)
3. Measure cleaner (soap) or use pre-determined packets
4. Transfer cleaner to bucket
5. Walk to spigot
6. Open spigot
7. Walk to hose- nozzle
8. Grasp hose nozzle with dominant hand
9. Position nozzle in bucket
10. Fill bucket to pre-determined amount
11. Direct hose (nozzle) to roof of car
12. Using cross body movements, wet entire car
13. Walk to opposite side
14. Repeat steps #11 - #13
15. Close nozzle
16. Lay aside nozzle
17. Grasp sponge
18. Place sponge in water - maintain grasp
19. Squeeze sponge
20. Place sponge on roof and hood panels
21. Using circular motion, apply sponge until area is soaped*
    *procedure may involve repeating steps #18-#20
22. Repeat procedure over entire car* (All panels)
23. Lay aside sponge
24. Re-grasp hose (nozzle)
25. Beginning on roof, wet all panels until soap is gone

TASK: to dry panel (car)

Preparation, Materials, Equipment:
soft, dry towels
car - wet from washing

Setting:
work area

General Instructions:
ignition off
windows closed

Entry Level Skills:
squeezing (grasp)

Method Verbs:
placing, wetting, drying, squeezing

Concept Areas:

right	wet
left	dry
top	bottom
side	

Task Analysis:
1. Place all materials in work area
2. Pick up dry towel (dominant hand)
3. Walk to wet vehicle
4. Place towel on roof (top panel) of car
5. Move towel over top (cross body movement)
6. Continue movement
7. Squeeze water from wet towel
8. Repeat steps #4 - #7 until top is dry (no water)
9. Walk to side (panel) of vehicle
10. Place towel on side of car (panel)
11. Repeat steps #4 - #7 until hood, trunk, side panels are dry
12. Place wet towel on work bench
13. Pick up dry towel
14. Repeat steps #4 - #12

Task Analysis #10

Auto Body

TASK: to wash wheels and rims (car)

Preparation, Materials, Equipment:
bucket, hose pre-attached to spigot, scrub brush, soap (cleaner) sponge, towel

Setting:
open work area with drain, spigot (water source)

General Instructions:
ignition off
windows closed

Entry Level Skills:
grasp, use of hose

Method Verbs:
placing, opening, closing, positioning squeezing

Concept Areas:

on	clean	top
off	dirty	dry
wet	turn	

Task Analysis:

1. Place all materials in work area
2. Walk to spigot
3. Open spigot
4. Walk to hose
5. Pick up hose nozzle with dominant hand
6. Walk to car wheel
7. Position hose nozzle so that water wets wheel and rim
8. Put down hose
9. Walk to spigot and close
10. Pick up scrub brush
11. Place cleanser on brush
12. Place brush on top of wheel
13. Rub (scrub) wheel and rim from top to bottom
14. Repeat steps #11 - #13 until all wheels and rims are scrubbed
15. Place brush on work bench
16. Pick up sponge
17. Place in bucket
18. Squeeze water from sponge
19. Place wet sponge on wheel and rim
20. Repeat steps #17 - #19 until cleanser is removed
21. Place sponge in bucket
22. Walk to spigot
23. Repeat steps #3 - #7 for all wheels
24. Put down hose
25. Walk to spigot and close
26. Place all materials on work bench

Task Analysis #11

Auto Body

TASK: to wash windows (car)

Preparation, Materials, Equipment:
- paper towels
- window spray

Setting:
- work area - work bench

General Instructions:
- ignition off
- windows closed

Entry Level Skills:
- grasp (fine motor)

Method Verbs:
- placing, squeezing, rubbing

Concept Areas:

clean	wet	bottom
dirty	dry	inside
on	top	outside

Task Analysis:
1. Place all materials on work bench
2. Pick up window spray
3. Squeeze trigger of spray container
4. Wet window - top to bottom
5. Place spray on work bench
6. Pick up dry paper towel
7. Place paper towel on window
8. Dry window (cross body movement)
9. Place wet towel on work bench
10. Repeat steps #6 - #8 until window is completely dry (no smears)
11. Repeat steps #2 - #9 for all outside windows
12. Open car door
13. Repeat steps #2 - #11 for inside windows
14. Close car door
15. Place all materials on work bench

Task Analysis #12

Auto Body

TASK: to wax panel (car)

Preparation, Materials, Equipment:
- paste wax
- wax pad applicator
- soft wiping cloths

Setting:
- work area - work bench

General Instructions:
- ignition off
- windows closed

Entry Level Skills:
- sequencing of activities (panel to panel), folding

Method Verbs:
- placing, folding, rubbing (circular motion), grasping

Concept Areas:

shiny	dry	in
dull	turn	

Task Analysis:
1. Place materials in work area
2. Pick up wax
3. Turn and take off lid (dominant hand)
4. Pick up wax applicator
5. Place wax can on work bench
6. Place applicator in can - remove small amount
7. Walk to car
8. Place applicator (wax) on top (roof) panel
9. Rub (circular motion) wax on panel
10. Repeat steps #6 - #9 until panel is covered with wax
11. Wask to side of vehicle
12. Repeat steps #6 - #9 until hood, trunk and side panels are covered with wax
13. Place applicator on work bench
14. Pick up dry cloth (dominant hand)
15. Walk to car
16. Place dry towel on top panel (roof)
17. Rub top panel (roof) use circular motion
18. Continue rubbing until white wax coating is gone - shiny
19. Repeat steps #16 - #19 until hood, trunk and side panels are clean
20. Place towels on work bench
21. Replace (turn) lid on wax can
22. Place wax and applicator on work bench

APPENDIX G

Concept Modules generally allow for the student to examine and explore all manipulative objects in order to reduce distractability and to provide opportunities for self-initiating behavior. The L.A.P. format is followed throughout by use of the "Look at" command and procedures for teaching the motor imitation phase of the program.

Concept Module # I

Goal: To teach short

Materials: Same width and thickness

1. Short and long strands of spaghetti
2. Short and long leather straps
3. Short and long rubber tubing
4. Short and long paper bags
5. Short and long metal strips
6. Short and long wire
7. Short and long saws
8. Short and long screwdrivers
9. Short and long thread
10. Short and long wooden dowels
11. Box

Procedure:

1. The student will examine and explore all the objects.

2. The student will look at the short objects on command of trainer, "Look at this short (saw)."

3. The student will touch and feel the length of the short objects on command of trainer, "Feel the short (saw)".

4. The student will imitate putting the short objects in the box on command of trainer, "Do this, put the short (saw)in the box."

5. The student will put the short objects in the box in the presence of the long objects on command of trainer, "Put the short (saw)in the box."

6. The student will point to the short objects in the presence of the long objects on command of trainer, "Show me the short (saw)."

7. The student will match identical short lengths of objects on command of trainer, "Show me another short (saw)."

Goal : To teach long

Materials: Same width and thickness

1. Long and short strips of paper
2. Long and short boards
3. Long and short electrical cords
4. Long and short pencils
5. Long and short ropes
6. Long and short plastic straws
7. Long and short shoe laces
8. Long and short crayons
9. Long and short paper towels
10. Long and short pieces of yarn
11. Box

Procedure:

1. The student will examine and explore all the objects.

2. The student will look at the long objects on command of trainer "look at this, long (pencil)."

3. The student will touch and feel the length of the long objects on command of trainer, "Feel the long (pencil)."

4. The student will imitate putting the long objects in the box on command of trainer, "Do this, put the long (pencil) in the box."

5. The student will put the long objects in the box in the presence of the short objects on command of trainer,"Put the long (pencil) in the box."

6. The student will point to the long objects in the presence of the short objects on command of trainer, "Show me the long (pencil)."

7. The student will match identical long lengths of objects on command of trainer, "Show me another long (pencil)."

Concept Module # 3

Goal: To differentiate between long and short

Materials: Same width and thickness

1. Long and short lines on paper
2. Long and short pieces of ribbon
3. Long and short chains
4. Long and short strips of material
5. Long and short ropes
6. Long and short pipes
7. Long and short pieces of chalk
8. Long and short paper towels
9. Long and short twine
10. Long and short pieces of masking tape

Procedure:

1. The student will examine and explore all the objects.

2. The student will look at all the objects placed randomly on the table on command of trainer, "Look at this long (line), "Look at this short (rope)."

3. The student will look at two object pairs placed randomly on the table, "Look at this, long (paper towel), "Look at this short chalk," "Look at this short (paper towel)," "Look at this long (chalk), " proceeding through all objects.

4. The student will imitate putting the two long and short object pairs in the box on command of trainer, "Do this, put the long (paper towel) in the box." "Do this, put the short (chalk) in the box." "Do this, put the short (paper towel) in the box," "Do this, put the long (chalk) in the box, " proceeding through all objects.

5. The student will put the two long and short object pairs in the box on command of trainer, "Put the long (paper towel) in the box." "Put the short chalk in the box". "Put the short (paper towel) in the box, "Put the long (chalk) in the box," proceeding through all objects.

6. The student will point to the long objects in the presence of the short objects on command of trainer,"Show me the long one."

7. The student will point to the short objects in the presence of the long objects on command of trainer, "Show me the short one."

8. The student will point to the correct object on command of trainer, "Show me the long one, " "Show me the short one," presented randomly.

9. The student will sort the objects correctly on command of trainer, "Put the long ones in this box," "Put the short ones in that box."

Concept Module #4

Goal: To teach turn (gross circular motion)

Materials:

1. Door knob
2. Cremora jar and lid (3" diameter or larger)
3. Jack-in-the-box
4. Egg beater
5. Spigot
6. Tool box
7. Telephone dial
8. Hand drill
9. Chair

Procedure:

1. The student will examine and explore all of the objects.
2. The student will look at the objects on command of trainer, "Look at this."
3. The student will imitate the action of turning the objects in a gross circular motion on command of trainer, "Do this, turn."
4. The student will turn the objects in a gross circular motion on command of trainer, "Turn."

Goal : To teach turn (fine circular motion)

Materials:

1. Screw in a board and screwdriver
2. Tooth paste and lid
3. key and lock
4. Twist tie and bag
5. Play watch
6. Alarm clock
7. Game spinner
8. Lipstick tube
9. Box of salt
10. Detergent bottle and lid

Procedure:

1. The student will examine and explore all of the objects.
2. The student will look at the objects on command of trainer, "Look at this".
3. The student will imitate the action of turning the objects in a fine circular motion on command of trainer, "Do this, turn".
4. The student will turn the objects in a fine circular motion on command of trainer, "Turn".

Concept Module # 6

Goal: To teach side

Materials:

1. Block
2. Show box with lid
3. Eraser
4. Small wooden box
5. Paper clip box
6. Tool box
7. Board
8. Sponge
9. Telephone book
10. Cereal box
11. Clay

Procedure:

1. The student will examine and explore all the objects.

2. The student will look at all sides of the objects on command of trainer, "Look at this, side."

3. The student will touch all sides of the objects on command of trainer, "Touch this side."

4. The student will imitate the action of turning the objects on command of trainer, "Do this, turn to another side."

5. The student will point to the sides of the objects on command of trainer, "Show me a side," "Show me another side."

6. The student will put a piece of clay on the sides of the objects on command of trainer, "Put the clay on the side," "Put the clay on another side".

Goal: To teach edge

Entry Concept Skill: Around

Materials:

1. Table
2. Board
3. Blackboard
4. Filing cabinet
5. Window sill
6. Garbage can
7. Cup
8. Plant pot
9. Chair
10. Bowl
11. Finger paint

Procedure:

1. The student will look at the objects on command of trainer, "Look at this".
2. The student will look at the edge of the objects as the trainer traces the edge of the objects on command of trainer, "Look at this, edge."
3. The student will imitate the action of tracing the edge of the objects on command of trainer, "Do this, put your finger around the edge".
4. The student will trace the edge of the objects on command of trainer, "Put your finger around the edge."
5. The student will finger paint the edge of the objects on command of trainer, "Paint the edge."

Goal: To teach "rough"

Materials:

1. Two rough ropes
2. Two rough plaster walls
3. Two rough gravel stones
4. Two hard, rough sponges
5. Two brillo pads
6. Two brooms (bristles)
7. Two pieces of bark
8. Two pieces of sandpaper
9. Two rough rubber textures
10. Two rough boards
11. Blindfold

Procedure:

1. The student will examine and explore all the rough objects on the table.

2. The student will look at the objects on command of trainer, "Look at this, rough _____."

3. The student will touch the objects on command of trainer, "Touch this, rough _____."

4. The student will touch the objects wearing blindfold on command of trainer, "Touch this, rough _____."

5. The student will match identical rough objects on command of trainer, "Show me another rough _____."

6. The student will place all the rough objects in the box on command of trainer, "Put the rough _____ in the box."

Goal: To teach "smooth"

Materials:

1. Two pieces of smooth, unbreakable glass
2. Two smooth table tops
3. Two smooth bowls
4. Two smooth balls
5. Two smooth chairs
6. Two smooth cups
7. Two smooth spoons
8. Two smooth trays
9. Two smooth books
10. Two smooth boards
11. Blindfold

Procedures:

1. The student will examine and explore all the smooth objects on the table.

2. The student will look at the objects on command of trainer, "Look at this, smooth _____."

3. The student will touch all the objects on command of trainer, "Touch this, smooth _____."

4. The student will touch the objects wearing a blindfold on command of trainer, "Touch this, smooth _____."

5. The student will match identical smooth objects on command of trainer, "Show me another smooth _____."

6. The student will place all the smooth objects in the box on command of trainer, "Put the smooth _____ in the box."

Goal: To differentiate between smooth and rough objects.

Materials:

1. Cotton material - Burlap material
2. Smooth rubber texture - Rough rubber texture
3. Smooth plant pot - Rough plant pot
4. Smooth cup - Rough cup
5. Smooth board - Rough board
6. Smooth, fine sand - Rough, coarse sand
7. Smooth leaves of plant - Rough leaves of plant
8. Smooth stone - Rough stone
9. Smooth, fine sandpaper - Rough, coarse sandpaper
10. Smooth sheet of paper - sheet of paper with raised dots

Procedure:

1. The student will examine and explore all the objects on the table.
2. The student will look at the objects on command of trainer, "Look at this."
3. The student will touch the objects on command of trainer, "Touch this".
4. The student will point to the smooth object in the presence of a rough object on command of trainer, "Show me the smooth one."
5. The student will point to the rough object in the presence of a smooth object on command of trainer, "Show me the rough one."
6. The student will point to the correct object on command of trainer, "Show me the smooth one," "Show me the rough one," presented randomly.
7. The student will sort the objects correctly on command of trainer, "Put the smooth ones here," "Put the rought ones here."

Concept Module # 11

Goal: To teach tight

Materials:

1. Two tight saucepan handles and two loose saucepan handles
2. Two paint cans with tight lids and two paint cans with loose lids
3. Two stacks of pennies packed tightly and two stacks of pennies loose on table
4. Two books with tight pages and two books with loose pages
5. Two boards with tight knobs and two boards with loose knobs
6. Four baby dolls

*7. Two tight buttons on shirt and two loose buttons on shirt
*8. Two tight scarves and two loose scarves
*9. Two tight belts and two loose belts
*10. Two tight shoes and two loose shoes
*11. Two tight socks and two loose socks

* The materials will be placed randomly on the baby dolls.

Procedure:

1. The student will examine and explore all the objects.

2. The student will look at all the objects on the table on command of trainer, "Look at this."

3. The student will look at the tight objects on the table on command of trainer, "Look at this, tight."

4. The student will touch the tight objects on the table on command of trainer, "Feel this, tight."

5. The student will imitate the action of attempting to move the tight object on command of trainer, "Do this, tight."

6. The student will point to the tight objects on command of trainer, "Show me the tight (knob)."

7. The student will match identical tight objects on command of trainer, "Show me another tight (knob)"

Concept Module #12

Goal: To teach loose

Materials:

1. Two boxes with loose strings and two boxes with tight strings
2. Two stacks of pencils wrapped with loose rubber bands and two stacks of pencils wrapped with tight rubber bands.
3. Two loose pegs in board and two tight pegs in board
4. Two jars with loose lids and two jars with tight lids
5. Two cups with loose handles and two cups with tight handles
6. Four baby dolls

*7. Two loose necklaces and two tight necklaces
*8. Two loose rings and two tight rings
*9. Two loose hats and two tight hats
*10. Two loose shoelaces and two tight shoelaces
*11. Two loose hair pins and two tight hair pins

* The materials will be placed randomly on the baby dolls.

Procedure:

1. The student will examine and explore all objects.

2. The student will look at all the objects on the table on command of trainer, "Look at this."

3. The student will look at the loose objects on table on command of trainer, "Look at this, loose."

4. The student will touch the loose objects on the table on command of trainer, "Feel this, loose."

5. The student will imitate the action of moving the loose object on command of trainer, "Do this, loose."

6. The student will point to the loose objects on command of trainer, "Show me the loose (peg)."

7. The student will match identical loose objects on command of trainer, "Show me another loose (peg)."

Concept Module #13

Goal: To differentiate between tight and loose

Materials:

1. Tight screw in board and loose screw in board
2. Tight twist tie on bag and loose twist tie on bag
3. Tight lid on bowl and loose lid on bowl
4. Tight ribbon on box and loose ribbon on box
5. Tight hinge on box and loose hinge on box
6. Tight nail in board and loose nail in board
7. Plant pot with dirt packed tightly and plant pot with dirt loose
8. Tight cap on rod and loose cap on rod
9. Tight paper clip on stack of paper and loose paper clip of piece of paper
10. Envelope with piece of paper placed tightly and envelope with small, loose piece of paper
11. Two boxes

Procedure:

1. The student will examine and explore all the objects.
2. The student will look at all the objects on the table on command of trainer, "Look at this."
3. The student will look at the tight objects on the table on command of trainer, "Look at this, tight."
4. The student will look at the loose objects on command of trainer, "Look at this, loose."
5. The student will touch the tight objects on the table on command of trainer, "Touch this, tight."
6. The student will touch the loose objects on the table on command of trainer, "Touch this, loose."
7. The student will imitate putting the tight objects in the box on command of trainer, "Do this, tight."
8. The student will imitate putting the loose objects in the box on command of trainer, "Do this, loose."
9. The student will point to the tight object in the presence of a loose object on command of trainer, "Show me the tight one."
10. The student will point to the loose object in the presence of a tight object on command of trainer, "Show me the loose one."
11. The student will point to the correct object on command of trainer, "Show me the tight one," "Show me the loose one" presented randomly.
12. The student will sort the objects correctly on command of trainer, "Put the tight ones in this box," "Put the loose ones in that box."

Concept Module #14

Goal: to differentiate between straight - crooked

Materials:

1. screw
2. screwdriver
3. board - pre-drilled holes
4. illustration (patterns) crooked-straight lines
5. straight nails
6. crooked nails

Procedure:

1. The student will examine and explore all objects.
2. The trainer will demonstrate correct way to turn screw in wood, keeping screw and screwdriver straight.
3. The student will place the screw in the wood, keeping driver and screw straight.
4. The trainer will demonstrate correct way to remove screw, keeping driver and screw straight.
5. The student will remove the screw, keeping driver and screw straight.
6. The student will point to the straight pattern on command of trainer, "Show me the straight line."
7. The student will point to the crooked pattern on command of trainer, "Show me the crooked line."
8. The student will point to the straight nail on command of trainer, "Show me the straight nail."
9. The student will point to the crooked nail on command of trainer, "Show me the crooked nail."